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Dr. Raymond W. Waldo
Station Manager
San Onofre

July 2, 2004

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

Subject: **Docket No. 50-362**
 Licensee Event Report No. 2004-001
 San Onofre Nuclear Generating Station, Unit 3

Gentlemen:

This submittal provides Licensee Event Report (LER) San Onofre Nuclear Generating Station, Unit 3 2004-001 for a manual trip of Unit 3 due to degraded circulating water pump suction resulting from heavy influx of sea grass.

Any actions listed are intended to ensure continued compliance with existing commitments as discussed in applicable licensing documents; this LER contains no new commitments. If you require any additional information, please so advise.

Sincerely,

LER No. Unit 3 2004-001

cc: B. S. Mallett, NRC Regional Administrator, Region IV
 C. C. Osterholtz, NRC Senior Resident Inspector, San Onofre Units 2 & 3

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NRC FORM 366 (7-2001)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104		EXPIRES 7-31-2004	
LICENSEE EVENT REPORT (LER) <small>(See reverse for required number of digits/characters for each block)</small>				<small>Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>			
1. FACILITY NAME San Onofre Nuclear Generating Station (SONGS) Unit 3				2. DOCKET NUMBER 05000-362		3. PAGE 1 OF 3	
4. TITLE Manual Reactor Trip Due to Sea Grass at Intake Structure							
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY
06	04	2004	2004-001-00			07	02
			8. OTHER FACILITIES INVOLVED				
			FACILITY NAME				
			DOCKET NUMBER				
			FACILITY NAME				
			DOCKET NUMBER				
9. OPERATING MODE		11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)					
1		20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)	
		20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)	
10. POWER LEVEL		100		20.2203(a)(1)		50.73(a)(2)(iv)(A) X	
		20.2203(a)(2)(i)		50.36(c)(1)(i)(A)		50.73(a)(2)(v)(A)	
		20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)	
		20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)	
		20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)	
		20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)	
		20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)	
		20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)	
12. LICENSEE CONTACT FOR THIS LER							
NAME R. W. Waldo, Station Manager, Nuclear Generation				TELEPHONE NUMBER (include Area Code) 949-368-8725			
13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT							
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT
				N			
14. SUPPLEMENTAL REPORT EXPECTED					15. EXPECTED SUBMISSION DATE		
YES (If yes, complete EXPECTED SUBMISSION DATE)					MONTH DAY YEAR		
X NO							
16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)							
<p>On June 4, 2004, at 0445 PDT, plant operators manually tripped the Unit 3 reactor due to degraded circulating water pump suction caused by heavy influx of sea grass across the traveling screens during very low tide conditions. At the time of the reactor trip, Unit 3 was at approximately 80 percent power. Safety systems responded as expected.</p> <p>Southern California Edison (SCE) reported this event to the NRC Operations Center (Log No. 40791) at 0821 EDT in accordance with 10 CFR 50.72(b)(2)(iv)(B) for actuation of the Reactor Protection System (RPS) [JC]. This follow-up Licensee Event Report is provided in accordance with 10 CFR 50.73(a)(2)(iv)(A).</p> <p>A traveling screen panel was repaired and broken shear pins replaced. The traveling screen system was tested and returned to service.</p> <p>Circulating water pumps are not essential for safe shutdown of the plant and do not provide a safety function. The SONGS 2/3 UFSAR Sections 15.2.1.3 and 15.10.2.1.3 credit the Auxiliary Feedwater System and ADVs for maintaining an adequate heatsink during a transient in which an instantaneous and complete loss of condenser vacuum occurs. Therefore the event reported herein is bounded by the UFSAR safety analysis identified above.</p>							

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Plant: San Onofre Nuclear Generating Station (SONGS) Unit 3
Event Date: June 4, 2004
Reactor Vendor: Combustion Engineering
Mode: Mode 1 – Power Operation
Power: 100 percent

Description of Event

On June 4, 2004, Unit 3 was operating at 100 percent power. Around 0400 PDT, plant operators (utility, licensed) noticed increasing differential pressure across the intake traveling screens [SCN] and received a high differential pressure alarm. At 0434, the resulting reductions in circulating water pump [P] suction pressure required operators to begin reducing reactor power. At 0435, operators secured one circulating water pump. Circulating water pump suction continued to degrade as indicated by circulating pump amperage, which began fluctuating. At 0445, with the Unit at approximately 80 percent power, operators manually tripped the reactor [RCT].

Southern California Edison (SCE) reported this event to the NRC Operations Center (Log No. 40791) at 0821 EDT in accordance with 10 CFR 50.72(b)(2)(iv)(B) for actuation of the Reactor Protection System (RPS) [JC]. This follow-up Licensee Event Report is provided in accordance with 10 CFR 50.73(a)(2)(iv)(A).

After the reactor trip, the steam bypass control system (SBCS) [JI] permissive channel began operating erratically. Approximately fourteen minutes after the trip, Operators switched from full-auto SBCS operation to atmospheric dump valves (ADVs) [V] to remove decay heat. This action is in accordance with operation procedures and operator training. The SBCS issue was determined to be unrelated to the sea grass influx event.

SONGS Unit 2 was unaffected by this event. The Unit 2 intake conduit structure is located separately from the Unit 3 intake conduit and was not impacted by heavy influx of sea grass. Unit 3 Salt Water Cooling system was unaffected by this event.

Cause of the Event

Plant operators manually tripped the reactor due to degraded circulating water pump suction caused by heavy influx of sea grass across the traveling screens during very low tide conditions.

Traveling rakes and screens are intended to prevent debris from entering the circulating water pumps and the shear pins provide overload protection to the screens. During this event, the rakes and screens were unable to keep up with the unusually heavy influx of sea grass and, as designed, shear pins broke and the screens ceased to operate.

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Corrective Actions

1. SCE repaired a traveling screen panel [PL] and replaced broken shear pins. The system was tested and returned to service.
2. The SBCS permissive controller was replaced. The system was tested and returned to service.
3. SCE will review operations procedures and training to determine if enhancements can be made in response to similar events.
4. SCE will review design changes to the current traveling screen system to determine if upgrades are warranted.

Safety Significance

Circulating water pumps are not essential for safe shutdown of the plant and do not provide a safety function. The SONGS 2/3 UFSAR Sections 15.2.1.3 and 15.10.2.1.3 credit the Auxiliary Feedwater System and ADVs for maintaining an adequate heatsink during a transient in which an instantaneous and complete loss of condenser vacuum occurs. Therefore the event reported herein is bounded by the UFSAR safety analysis identified above and is of low to no safety significance.

Additional Information

In the recent past, SCE has not reported reactor trips resulting from degraded circulating water pump suction or loss of condenser vacuum.